

REMARKS

Claims 13-18 and 20-27 are presented for consideration, with claims 20, 21 and 25 being independent.

Independent Claims 20 and 21 have been amended to further distinguish Applicants' invention from the cited art. In addition, editorial changes have been made to selected claims, and Claims 25-27 have been added to provide an additional scope of protection. In amending the claims, the objection noted in Claim 20 has been attended to.

Initially, Claims 13-18 and 20-24 were rejected under 35 U.S.C. §112, first paragraph, for allegedly failing to comply with the written description requirement. In response to this rejection, Claims 20 and 21 have been amended to recite heating of the member at a temperature lower than 130°C. Additionally, Claim 23 has been amended to depend solely from Claim 22, thus providing an upper limit to the temperature range. Accordingly, reconsideration and withdrawal of the rejection of the claims under 35 U.S.C. §112, first paragraph, is respectfully requested.

Claims 13-18 and 20-24 also stand rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. As will be appreciated, Claims 20 and 21 have been amended as suggested by the Examiner to even more clearly set forth the invention. Accordingly, reconsideration and withdrawal of the rejection of the claims under 35 U.S.C. §112, second paragraph, is respectfully requested.

Claims 13-18 and 20-23 stand rejected under 35 U.S.C. §103 as allegedly being obvious over Vrijssen '673 in view of Veerasamy '242. Claims 21-23 are rejected as

allegedly being obvious over Haven '681 in view of Wang '281 and Veerasamy. Claims 13-18 and 20 are rejected as allegedly being obvious over Haven in combination with Wang '281, Veerasamy, Misonou '610 and Minnaai '733. Claims 21-24 are rejected as allegedly being obvious over Wang '281 in view of Wang '321 and Veerasamy. Finally, Claims 13-18 and 20 stand rejected as allegedly being obvious over Wang '281, Wang '321 and Veerasamy and further in view of Misonou and Minnaai. These rejections are respectfully traversed.

Claim 20 of Applicants' invention relates to a method of manufacturing an image display apparatus having an airtight container containing display devices, and includes the steps of setting a member for defining an airtight space together with a substrate to abut on the substrate to form a corner portion between the member and the substrate, and supplying a seal bonding material of indium or indium alloy to the corner portion or to a portion to be the corner portion. As amended, Claim 20 sets forth the step of, after the setting step, under a condition of heating the member by a first heating member at a temperature lower than 130°C, lower than a temperature at which a seal bonding material can perform bonding, heating locally the seal bonding material by a second heating member to a temperature equal to or higher than a temperature at which the seal bonding material can perform bonding, wherein the seal bonding material heated is then cured, so as to perform airtight bonding of the substrate and the member with the seal bonding material to form a closed bonding line. Claim 20 also includes the step of forming the display devices.

Claim 21 relates to a method of manufacturing an airtight container, and includes the steps of setting a member and supplying the seal bonding material as in Claim 20.

Claim 21 has also been amended along the same lines as Claim 20 to include the step of, after the setting step, under a condition of heating the member by a first heating member at a temperature lower than 130°C, lower than a temperature at which the seal bonding material can perform bonding, heating locally the seal bonding material by a second heating member to a temperature equal to or higher than a temperature in which the seal bonding material can perform bonding.

Support for the amendments to Claims 20 and 21 can be found, for example, in Figure 4C and the accompanying specification on page 33, lines 8-22, and in Figure 7C and the accompanying specification on page 36, lines 13-25. In accordance with Applicants' claimed invention, a high performance image display apparatus can be provided.

In the Office Action, the patents to Vrijssen, Haven, Wang '281 were applied as primary citations in various combinations with one or more secondary citations.

The only newly cited reference, to Vrijssen, relates to an electron tube that includes a glass window 2 that is fixed to an upright flange 7 using an indium seal 9. The indium seal forms a seam 8, with a copper wire 10 being embedded in the indium.

The patent to Haven is directed to a multiple glass sheet glazing unit consisting of sheets of glass 26 and 27 separated by an air space 28 and supported by separator strip 29. The separator strips are joined to the glass by a solder composition of fillets 93 and 94. The Office Action asserts that a seal bonding material, i.e., solder deposits 91, is supplied to a corner portion and heated to a temperature equal to or higher than a temperature at which the seal bonding material performs bonding.

Wang '281 relates to a vacuum window unit and is said to supply a bonding material of indium or indium alloy to a corner portion formed by a substrate and spacers/pillars 5.

All of the primary citations, however, fail to teach or suggest, among other features, heating the member by a first heating member at a temperature lower than that at which the seal bonding material can perform bonding, and heating locally the seal bonding material by a second heating member to a temperature at which the seal bonding material can perform bonding.

The secondary citations fail to compensate for the deficiencies in the primary citations.

Veerasamy relates to a window unit 31 with a first glass substrate 33, a second glass substrate 35 and a hermetic edge seal 51. Veerasamy is relied upon for teaching that indium and indium alloy perform bonding at temperatures less than or equal to 130°C.

Misonou and Minnaai are relied upon for teaching that the periphery of the container can be hermetically sealed by a seal bonding material.

Wang '321 is directed to a vacuum window unit with a hermetically sealed periphery, and is relied upon for teaching that end portions of members/substrates in close proximity to the seal bonding material are heated to a temperature equal to or lower than that of the seal bonding material during local heating.

Without conceding the propriety of the proposed combinations set forth in the Office Action, none of the art, whether taken individually or collectively, teaches or suggests, among other features, heating the member by a first heating member to a temperature lower than

that at which the seal bonding material can perform bonding, and heating locally the seal bonding material by a second heating member to a temperature at which the seal bonding material can perform bonding.

Accordingly, reconsideration and withdrawal of the rejections of the claims under 35 U.S.C. §103 is respectfully requested.

Therefore, it is submitted that Applicants' invention as set forth in independent Claims 20 and 21 is patentable over the cited art. In addition, dependent Claims 13-18 and 22-24 set forth additional features of Applicants' invention. Independent consideration of the dependent claims is respectfully requested.

Newly submitted Claims 25-27 are also submitted to be patentable. In Claim 25, a method of manufacturing an airtight container includes the steps of setting a member for defining an airtight space together with a substrate to abut on the substrate to form a corner portion, supplying a low-melting point substance to the corner portion or to a portion to be the corner portion, and performing airtight bonding between the substrate and the member with the low-melting point substance to form a closed bonding line. The airtight bonding is performed by heating to a temperature equal to or higher than a temperature at which the low-melting point substance can perform a bonding to the substrate and the member, and then by curing the low-melting point substance, successively at a plurality of small areas arranged along the corner portion. The performing step also includes penetrating the low-melting point substance between the substrate and the member by heating the low-melting point substance. Support for Claim 25

can be found, for example, on page 20, line 18 through page 21, line 24 and on page 33, lines 8-22 of the specification.

In view of the foregoing, reconsideration and allowance of this application is deemed to be in order and such action is respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

/Scott D. Malpede/

Scott D. Malpede
Attorney for Applicants
Registration No. 32,533

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

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